

Application Number	10/577,655
Filing Date	05-01-06
First Named Inventor	Kazuhiro Machida
Art Unit	1633
Examiner Name	Janet L. Epps-Smith
Attorney Docket Number	0425-1257PUS1

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Examiner Initial *	Cite No. 1	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Country <sup>2</sup> Code	Number <sup>4</sup> Kind Code (if known) <sup>5</sup>				
	11	EP	1 380 579 - A1	01-14-2004			<input type="checkbox"/>
	12	EP	1 508 570 - A1	02-23-2005			<input type="checkbox"/>
	13	EP	1 541 570 - A1	06-15-2006			<input type="checkbox"/>
	14	EP	1 705 247 - A1	09-27-2006			<input type="checkbox"/>
	15	CN	1489583 - A	04-14-2004			<input checked="" type="checkbox"/>
	16	CA	2 463 855 - A1	05-15-2003			<input type="checkbox"/>

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## U.S. PATENT DOCUMENTS

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	17	CA	2 494 536 - A1	02-05-2004			T
	18	CA	2 507 641 - A1	06-17-2004			T
	19	WO	2004/065401 - A1	08-05-2004			T
	20	WO	2005/052152 - A1	06-06-2005			✓
	21	WO	2006/009276 - A1	01-26-2006			✓
	22	WO	93/13663 - A1	07-22-1993			

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	23	"Cell Technology," Vol. 14, No. 5, pp. 591-593, 1995	<input type="checkbox"/>
	24	BECK et al., "Nucleotide sequence of bacteriophage fd DNA," Nucleic Acids Research, Vol. 5, No. 12, pp. 4495-4503, December 1978	<input type="checkbox"/>
	25	BIBB et al., "Genetic Studies of the Fertility Plasmid SCP2" Variants in Streptomyces coelicolor A3(2)," Journal of General Microbiology, Vol. 126, pp. 427-442, 1981	<input type="checkbox"/>
	26	BIBB et al., "Nucleotide sequences encoding and promoting expression of three antibiotic resistance genes indigenous to Streptomyces," Mol. Gen. Genet., Vol. 199, pp. 26-38, 1985	<input type="checkbox"/>
	27	BIBB et al., "The mRNA for the 23S rRNA methylase encoded by the ermE gene of Saccharopolyspora erythraea is translated in the absence of a conventional ribosome-binding site," Molecular Microbiology, Vol. 14, No. 3, pp. 533-545, 1994	<input type="checkbox"/>
	28	CHATER, "Streptomyces Phages and Their Applications to Streptomyces Genetics," The Bacteria, Vol. IX, Chapter 5, pp. 119-158, 1986	<input type="checkbox"/>
	29	Chinese Office Action, dated February 5, 2010, for Chinese Application No. 2006800182893	<input type="checkbox"/>
	30	DECKER et al., "Cloning and Characterization of a Polyketide Synthase Gene from Streptomyces fradiae T02717, Which Carries the Genes for Biosynthesis of the Angucycline Antibiotic Urdamycin A..." Journal of Bacteriology, Vol. 177, No. 21, pp. 6126-6136, November 1995	<input type="checkbox"/>
	31	DONADIO et al., "An erythromycin analog produced by reprogramming of polyketide synthesis," Proc. Natl. Acad. Sci. USA, Vol. 90, pp. 7119-7123, August 1993	<input type="checkbox"/>
	32	GUILHOT et al., "Efficient Transposition in Mycobacteria: Construction of Mycobacterium smegmatis Insertional Mutant Libraries," Journal of Bacteriology, Vol. 176, No. 2, pp. 535-539, January 1994	<input type="checkbox"/>

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	33	HOPWOOD et al., "Molecular Genetics of Polyketides and its Comparison to Fatty Acid Biosynthesis," Annu. Rev. Genet., Vol. 24, pp. 37-66, 1990	<input type="checkbox"/>
	34	KATZ et al., "Polyketide Synthesis: Prospects for Hybrid Antibiotics," Annu. Rev. Microbiol., Vol. 47, pp. 875-912, 1993	<input type="checkbox"/>
	35	KENDALL et al., "Complete Nucleotide Sequence of the Streptomyces lividans Plasmid pJJ101 and Correlation of the Sequence with Genetic Properties," Journal of Bacteriology, Vol. 170, No. 10, pp. 4634-4651, October 1988	<input type="checkbox"/>
	36	KOJIMA et al., "The rpoZ Gene, Encoding the RNA Polymerase Omega Subunit, Is Required for Antibiotic Production and Morphological Differentiation in Streptomyces kasugaensis," Journal of Bacteriology, Vol. 184, No. 23, pp. 6417-6423, December 2002	<input type="checkbox"/>
	37	LAMB et al., "The Cytochrome P450 Complement (CYPome) of Streptomyces coelicolor A3(2)," The Journal of Biological Chemistry, Vol. 277, No. 27, pp. 24000-24005, July 5, 2002	<input type="checkbox"/>
	38	LAMPEL et al., "Cloning and Sequencing of a Gene Encoding a Novel Extracellular Neutral Proteinase from Streptomyces sp. Strain C5 and Expression of the Gene in Streptomyces lividans 1326," Journal of Bacteriology, Vol. 174, No. 9, pp. 2797-2806, May 1992	<input type="checkbox"/>
	39	McALPINE et al., "Microbial Genomics as a Guide to Drug Discovery and Structural Elucidation: ECO-02301, a Novel Antifungal Agent, as an Example," J. Natl. Prod., Vol. 68, pp. 493-496, 2005	<input type="checkbox"/>
	40	McDANIEL et al., "Multiple genetic modifications of the erythromycin polyketide synthase to produce a library of novel "unnatural" natural products," Proc. Natl. Acad. Sci. USA, Vol. 96, pp. 1846-1851, March 1999	<input type="checkbox"/>
	41	NEAL et al., "Nucleotide sequence analysis reveals similarities between proteins determining methylenomycin A resistance in Streptomyces and tetracycline resistance in eubacteria," Gene, Vol. 58, pp. 229-241, 1987	<input type="checkbox"/>
	42	PFEIFER et al., "Biosynthesis of Complex Polyketides in a Metabolically Engineered Strain of E. Coli," Science, Vol. 291, pp. 1790-1792, March 2, 2001	<input type="checkbox"/>

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	43	SAKAI et al., "Pladienolides, New Substances from Culture of Streptomyces platensis Mer-11107. I. Taxonomy, fermentation, isolation and screening," The Journal of Antibiotics, Vol. 57, No. 3, pp. 173-179, XP-002462515, March 2004	<input type="checkbox"/>
	44	SCHMID et al., "AUD4, a new amplifiable element from Streptomyces lividans," Microbiology, Vol. 145, pp. 3331-3341, 1999	<input type="checkbox"/>
	45	SCHWECKE, et al., "The biosynthetic gene cluster for the polyketide immunosuppressant rapamycin," Proc. Natl. Acad. Sci. USA, Vol. 92, pp. 7839-7843, XP 000652288, August 1995	<input type="checkbox"/>
	46	SEKI-ASANO et al., "Isolation And Characterization Of A New 12-Membered Macrolide FD-895," The Journal of Antibiotics, Vol. 47, No. 12, pp. 1395-1401, XP-002951021, 1994	<input type="checkbox"/>
	47	SHAH et al., "Cloning, Characterization and Heterologous Expression of a Polyketide Synthase and P-450 Oxidase Involved in the Biosynthesis of the Antibiotic Oleandomycin," The Journal of Antibiotics, Vol. 53, No. 5, pp. 502-508, May 2000	<input type="checkbox"/>
	48	TAKANO et al., "Construction of thiostrepton-inducible, high-copy-number expression vectors for use in Streptomyces spp.," Gene, Vol. 166, Issue 1, pp. 133-137, December 1, 1995	<input type="checkbox"/>
	49	TRIGLIA et al., "A procedure for in vitro amplification of DNA segments that lie outside the boundaries of known sequences," Nucleic Acids Research, Vol. 16, No. 18, page 8186, 1988	<input type="checkbox"/>
	50	US Office Action, dated August 24, 2010, for US Application No. 11/919,579	<input type="checkbox"/>
	51	US Office Action, dated December 9, 2010, for US Application No. 11/919,579	<input type="checkbox"/>
	52	US Office Action, dated February 1, 2010, for US Application No. 11/630,689	<input type="checkbox"/>

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	53	US Office Action, dated May 25, 2010, for US Application No. 11/630,689	<input type="checkbox"/>
	54	US Office Action, dated October 20, 2010, for US Application No. 11/630,689	<input type="checkbox"/>
	55	WEBER et al., "An Erythromycin Derivative Produced by Targeted Gene Disruption in <i>Saccharopolyspora erythraea</i> ," Science, Vol. 252, pp. 114-117, April 5, 1991	<input type="checkbox"/>
	56	XUE et al., "A gene cluster for macrolide antibiotic biosynthesis in <i>Streptomyces venezuelae</i> : Architecture of metabolic diversity," Proc. Natl. Acad. Sci. USA, Vol. 95, pp. 12111-12116, October 1998	<input type="checkbox"/>
	57	YANISCH-PERRON et al., "Improved M13 phage cloning vectors and host strains: nucleotide sequences of the M13mp18 and pUC19 vectors," Gene, Vol. 33, Issue 1, pp. 103-119, 1985	<input type="checkbox"/>
	58	YIGUANG, "Application of Genetic Engineering Techniques in the Study of Macrolide Antibiotics," Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences & Peking Union Medical College, Vol. 18, No. 2, pp. 92-98, March 31, 1997	<input checked="" type="checkbox"/>
	59	ZALACAIN et al., "Nucleotide sequence of the hygromycin B phosphotransferase gene from <i>Streptomyces hygroscopicus</i> ," Nucleic Acids Research, Vol. 14, No. 4, pp. 1565-1581, 1986	<input type="checkbox"/>
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